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ABSTRACT

Designed for instructors at Beaufort Technical College (BTC) in South Carolina, this handbook provides a brief guide to competency-based education (CBE) and to the available resources at the college for assistance. Section 1 offers introductory comments on the concept of quality control and the five basic components of educational quality control. Section 2 defines CBE, identifying its seven essential elements as the definition and verification of program competencies; the assignment of program competencies to courses; the provision of course syllabi containing specific competency statements to students; the statement and design of learning objectives and activities to teach each competency; the construction and administration of criterion-referenced teacher-made tests to determine student knowledge; the provision of remediation and/or acceleration/enrichment; and the assessment of program content and method of delivery. Section 3 focuses on the need for CBE and the differences between the traditional and competency-based education approaches. Section 4 explains how an instructor plans for and implements CBE, offering guidance on assessment, curriculum design, instruction, course and student evaluation and subsequent revisions. Section 5 lists and describes available campus resources. Appendices provide information on institutionally-defined competencies for degree graduates, program outcomes statements for 10 occupational programs, a glossary, a verb list for use in instructional objectives, checklists for performance objectives and criterion-referenced test items, tips for CBE instruction, a sample DACUM chart sample, and syllabus format. (LAL)

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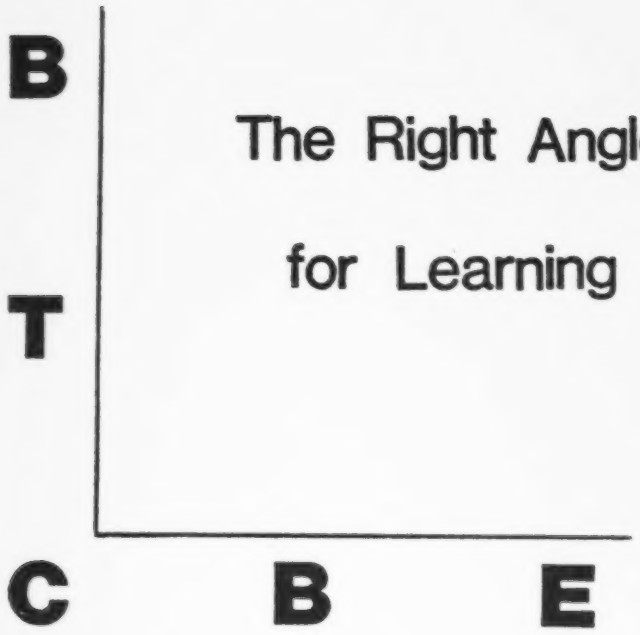

The Right Angle for Learning

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JC 870 075

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CBE: THE RIGHT ANGLE FOR LEARNING

August, 1985

Revised August, 1986

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Beaufort, South Carolina 29901

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CBE: The What, Why, and How

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1. INTRODUCTION

In response to the National Commission on Excellence's report on American public schools, Dr. James Connor of the North Carolina Department of Community Colleges wrote a timely article called, "In Education, Quality Must Be Job One," which noted a certain degree of comparison between the American Automotive Industry and EIA-style improved education. Connor's points bear repeating here.

The Commission recommended among other things that American education should involve more hours per day and more days per year; and that teachers should be paid more. Connor observes that already American cars take twice as long to build as Japanese cars and American auto workers earn more than twice as much as their Japanese counterparts. However, no one would, or indeed can, claim that American cars are twice as good (or even as good). What the American automotive industry generally has lacked, and what the Japanese car industry has had all along, is quality control.

It should be noted that the most common quality-related word in American industry (and American education) is quality assurance, a totally different concept altogther. Quality assurance says, "If it doesn't work, we'll try to fix it or you can have another one just like it." In education, quality assurance most often takes the form of norm-referenced testing, an academic post-mortem that can tell us if the "patient" is alive or terminally ill.

Quality Control is an on-going, continuing evaluation of the process of production plus timely feedback to the "producers," plus timely action by the producers. This means that monitoring, communications, and correction/improvement are going on all the time.

The best example of the effects of quality control is that of Sony. When Sony first decided to mass market its television sets in the United States, there were few dealers and no repair facilities capable of handling its advanced electronics. With no repair shops available, Sony made a simple production decision -- make T.V. sets that don't break. They did, and they don't, and the rest is history.

To apply this principle to education, one must do two things: (1) define quality and (2) practice quality control.

Quality, What is It

Quality may be defined in two ways -- first, quality is fitness for use as judged by the user (employers, receiving transfer institutions, and the student himself/herself). Second, quality is consummation of purpose, passing a state board certification, for example. It is the job of educators to be certain that the standard of quality, whatever that standard is, is being adhered to and met.

The Practice of Quality Control

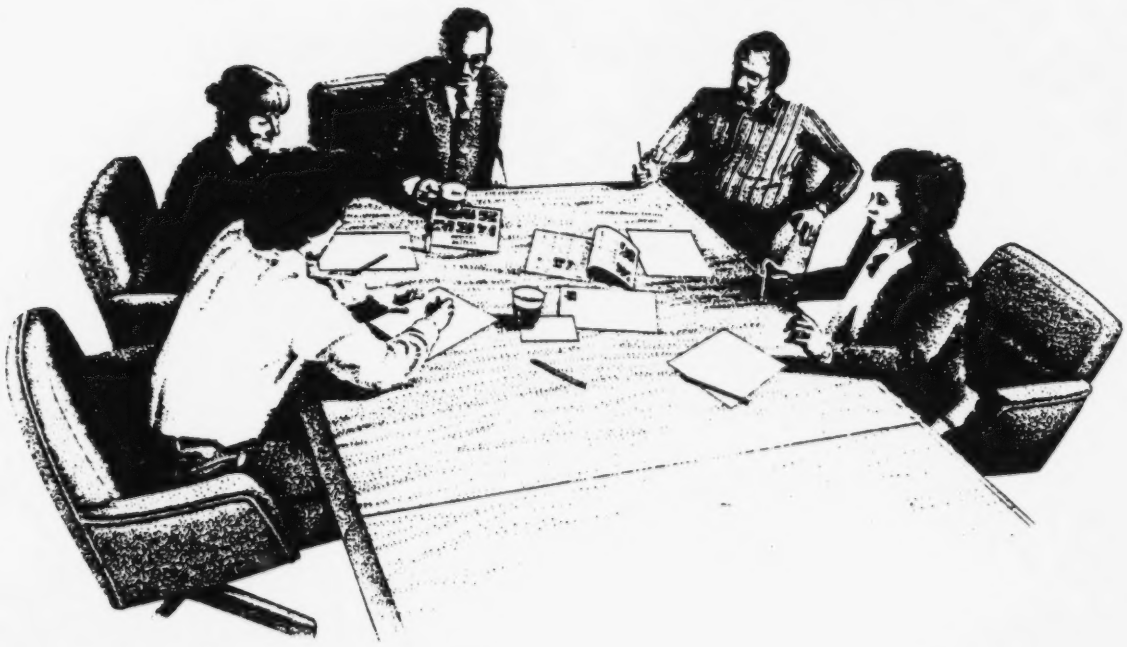
The practice of educational quality control has five basic components:

(1) Measure the learning status of the student before instruction, i.e., know what he/she knows or does not know.
(2) Identify the necessary learning, sequence, and degree.
(3) Take measures to help the student learn, to cause learning to occur.
(4) Inform the student periodically what he/she has learned and has not yet learned.
(5) Certify that the student indeed has learned what he/she needed to learn.

At Beaufort Technical College, our commitment to excellence and quality is through competency-based education (CBE). It is no mere catch phrase or fundable jargon.

CBE is this College's plan and process for excellence. It is very much a part of the faculty development/evaluation model. For it to be successful requires the commitment of each of us.

Contained in this section of your handbook is a brief guide to CBE. It is not intended to be, nor could it be within the confines of a handbook, comprehensive and entire of itself. As you pursue each facet of CBE, the resources exist on campus to provide you with the assistance you need to be successful. Your role is to ask for that assistance you require.



2. CBE: WHAT?

What Exactly is CBE?

Competency-based education (CBE) is a flexible, systematic approach to instruction where students work toward clearly outlined learning objectives. The seven essential elements of competency-based education are:

1. Program competencies are defined, and they are verified through on-the-job practitioners, program graduates, employers and advisory committees.
2. Program competencies are assigned to courses. Competency areas within the specific course are identified.
3. Course syllabi containing specific competency statements are given to students. These competency statements clearly state what the student is to learn, as well as how the student will be tested and under what conditions.
4. Learning objectives and activities that teach each of the competencies stated are then designed.
5. Criterion referenced teacher-made tests are constructed and administered to determine the level of student knowledge and/or performance. Criterion referenced tests simply test, under the conditions previously specified, the competencies stated in the course syllabi.
6. Remediation and/or acceleration/enrichment is provided for students. CBE requires that students attain an acceptable level of performance. But it also can provide a variable time frame in order to attain that level.
7. The program content and the method of delivery are assessed. They should be reevaluated regularly to determine the effectiveness of instruction.

3. CBE: WHY?

Why the Need for CBE?

The student body at Beaufort Technical College consists of individual differences (age, values, basic skills, rates of learning, styles of learning, goals, etc). We face the challenge of redesigning instructional methodology to accomodate these student differences. Competency-based education is the system adopted by Beaufort Technical College and stongly recommended by the South Carolina State Board for Technical and Comprehensive Education. It is in use in many other states for improving and maintaining a high quality of instruction designed to increase the probability of student success.

Further, it is necessary to ensure that the College prepares quality students for area business, industry and health service agencies. One of the strongest demands of the College's service area is for accountability, and from this demand competency-based education has emerged. Through competency-based education the graduates of Beaufort Technical College should possess the skills, knowledge, and attitudes required by prospective employers.

This approach differs from the traditional instructional aproach in that competency-based education stresses the ability to do or perform. There are many aspects which make competency-based education a much stronger approach for the faculty and staff to consider. Among these are:

Traditional Approach	Competency-Based Education Approach
1. Individual course objectives are vague, in the instructor's mind, or presented in brief statements though course outlines or syllabi.	1. Individual course objectives are competency statements given to the students in course outlines.
2. Course content is usually determined by a particular textbook, or "what we have always taught."	2. Course content is determined by identifying competencies needed for successful employment and competencies employers require. These competencies are validated and sequenced through advisory committees, return to industry, state or national standards, peer groups, or guidelines, using DACUM or a modified DACUM process.
3. Subject matter is presented to the entire class at one time with the expected time frame for learning and under-	3. Subject matter is presented in a variety of ways (large group, small group, and/or individually) with varying time

standing to be the same for the entire class.	frames to accommodate different learning abilities. Some students will move at an accelerated pace, while some may need remediation. Instruction is individualized to the maximum extent possible.
4. Evaluation (testing) is done for all students at the same time. Instruction is group-paced and time-based.	4. Evaluation takes place when the student feels he has mastered specified competencies.
5. Tests are norm-referenced and/or standardized paper and pencil tests. Usually the tests are given only once.	5. Tests consist of criterion referenced test items and range from paper and pencil tests to the actual demonstration of skills.
6. Students are not usually told how well they must perform to receive an A, B, C, D, or F on a test.	6. Students are told from the outset how well they must demonstrate specific competencies to receive an A, B, C, D, or F on a test. A detailed list of competencies, complete with statements regarding the desired levels of skill proficiency, are introduced at the very beginning of each course.
7. Grades are usually determined by comparing an individual's score to the scores of the other students by norm-referenced grading.	7. Grades are determined by comparing an individual's performance to prespecified criteria or standards.
8. Students may pass a course even though they do not master certain skills which are needed for successful completion of subsequent courses.	8. Students do not pass or receive credit for a course until they demonstrate competency attainment of skills needed in future courses or in employment.

4. CBE: HOW?

How Do I Go About Planning For and Implementing CBE?

The college CBE System provides a step-by-step process for implementing competency-based education. It should be noted in reference to the system that, for an existing program, many elements are already in existence, such as course objectives, unit activities, teacher-made tests, etc. Nothing in CBE says that you must throw these out and start over. However, you must measure what already exists against the requirements of a competency-based program and delete or modify those not in accord with required outcomes.

The system itself is eclectic in nature, drawing from the experience of other colleges and in accord with state requirements such as the Faculty Performance Management System (FPMS) mandated for faculty evaluation. It is also in accord with the new SACS standards for outcomes-derived and evaluated programs.

The notes which follow on the elements of the system are not meant to be complete but to serve as an introduction to further study. (System elements are identified by **BOLD TYPE**.)

1. ASSESSMENT: Identify Program Outcomes

   A successful CBE beginning requires starting at the end by asking the question, "What outcome competencies must graduates of this program possess?"

   To identify program level outcome competencies, you may use the **DACUM** process, a modified DACUM process requiring the service of a program advisory committee, or an existing **OCCUPATIONAL ANALYSIS**. From such a chart or list, the program advisory committee can **IDENTIFY** the PROGRAM PURPOSE AND **PROGRAM COMPETENCIES** (OUTCOMES).

   (Over the 1985-86 academic year, advisory committees identified the purpose and outcomes for each Associate Degree program; the faculty identified the institutional competencies required of all Associate Degree graduates.)

2. CURRICULUM DESIGN: Develop course competencies

   Next, the instructor needs to design the curriculum, taking into consideration **INSTITUTIONAL COMPETENCIES** and the identified program outcomes, all of which must be satisfied within the program study. As you **ANALYZE THE PROGRAM COMPETENCIES**, you will separate outcomes statements into their componet skills, perhaps identify needed **PROFESSIONAL DEVELOPMENT** for yourself or other staff members, and develop a logical learning continuum as you **IDENTIFY/SEQUENCE COURSE OBJECTIVES (PROGRAM MAPPING)**. This process identifies course pre-requistes and co-requistes by literally asking which skills a student must learn before moving on to the next level. In doing this, you identify courses and course sequence.

Next, you should **IDENTIFY/SEQUENCE UNIT OBJECTIVES**, the contents of each course. This involves planning of **COURSE MANAGEMENT, PRE/POST TESTS, LEARNING ACTIVITIES, LEARNING RESOURCES, FACILITIES, SUPPLIES, INTERNSHIPS, ETC.**, all those course elements which cause learning to occur.

Once courses are developed, the instructor can **IDENTIFY ENTRY LEVEL SKILLS**, both for the program as a whole and for specific beginning courses. To **ASSESS ENTRY LEVEL SKILLS** may involve a variety of methods, including standardized tests, aptitude tests or other appropriate measusres. Based on skills assessment, you will **DETERMINE COURSE PLACEMENT (ADVISING)** for individual students or, through an appropriate Developmental Studies program, **PROVIDE REMEDIATION.**

3. PROVIDE LEARNING: Offer opportunities for students to master the required institutional and program competencies.

The **COURSE** is where learning happens (or doesn't). Students need frequent feedback; they need a variety of means to learn; they may need a remediation loop within the course. Unit **PRE/POST TESTS**, to measure performance of specific competencies, must be criterion referenced (i.e. they must test for what is supposed to be learned). Course **LEARNING ACTIVITIES** and **LEARNING RESOURCES** should be individualized to the extent possible; emphasis should be on learning by doing, on active learning. As additional program **COURSES** are taken, the accretion of marketable skills should be obvious to the student and an incentive to finish the curriculum.

4. ASSESS EFFECTIVENESS AND REVISE AS NEEDED: The student, the instructor, the individual courses, and the program must be evaluated.

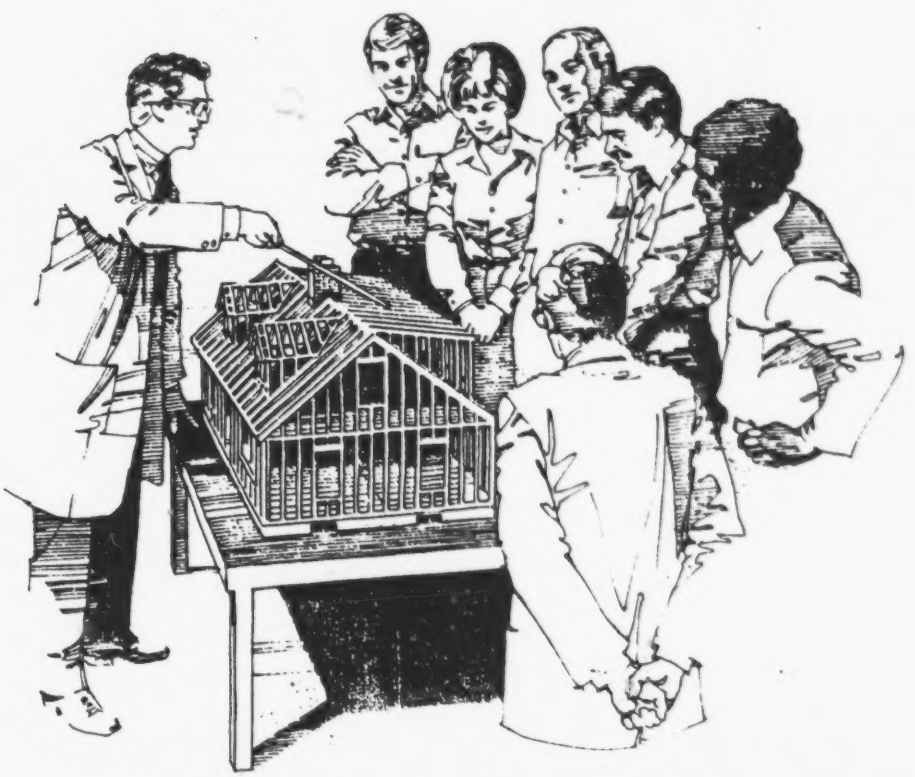
STUDENT EVALUATION (course) and **STUDENT ASSESSMENT** (program) constitute the primary elements of the CBE System. The student is literally the end-product of education, and we as a college are measured by the quality of our end-product. Students pass courses in that they reach specified skill levels in identified course competencies. Students should exit a program only with complete assurance that they have achieved specific skill levels in the stated **PROGRAM OUTCOMES** as well as the required **INSTITUTIONAL COMPETENCIES.** This involves a broader assessment than just looking at a grade transcript, caluclating a GPR, totaling the hours, and awarding a degree. The student shoiuld literally bear the "Stamp of Approval" of the faculty, and the Advisory Commitee, before a degree is awarded. The added dimensions of assessment may involve an "assessment center" where simulations test real-world skills, a supervised work experience or internship, a special project, an interview board, or whatever methodology might assure satisfactory program completion, Students who do not meet the standards should not receive degrees simply because they kept a seat warm for a specified time span.

Please note that student evaluation and student assessment are not just activities that take place at the end as a "quality assurance" add-on. CBE, as an educational process of Quality Control, should provide to the student an on going and constant reminder of the outcomes and standards expected of a program graduate.

INSTRUCTOR EVALUATION and **COURSE EVALUATION** are vital to the process of measuring program effectiveness and **COURSE/UNIT REVISION.** To a large extent, it is true that a CBE System is never finished but only in a new, and higher, stage of development. This is its strength, not a weakness.

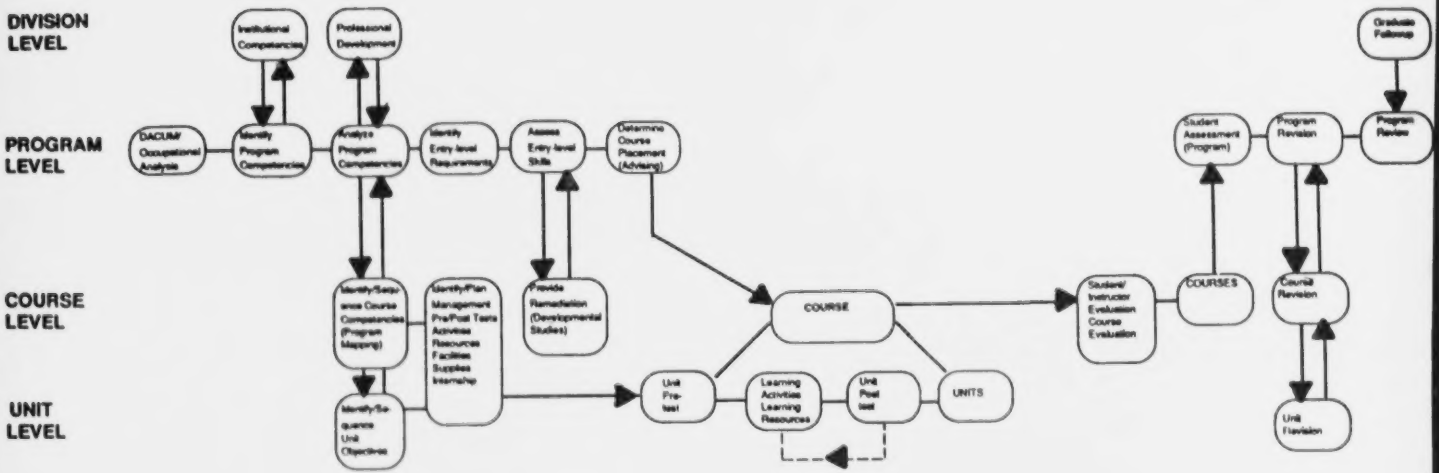
PROGRAM REVISION, in one sense, is a product of course/unit revision. In a larger context, it derives from a systematic **PROGRAM REVIEW** process, both that mandated by the state and locally as indicators of accomplishment and of quality. An important part of that review is **GRADUATE FOLLOWUP**, with both graduate and employer input.

Implementation of Competency-Based Education is obviously no short term matter nor can it be dropped for a while and then taken up again as the urge strikes. CBE is a long term commitment to quality on the part of the college and of its faculty.



BEAUFORT TECHNICAL COLLEGE

COMPETENCY-BASED EDUCATION SYSTEM



JUNE, 1986

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5. SPECIAL RESOURCES

A number of special resources are available to you for planning, implementing, and evaluating CBE. Among these resources are:

1. The Learning Resources Center: Instructional media and many instructional tools (equipment) which provide alternate modes of instruction are available. Consider various types of media. Check to see if the media wanted are available or if they will have to be produced, rented, or purchased. If the media must be rented or purchased, how much will they cost and how long will they take to obtain? If the media can be produced at Beaufort Technical College, you may be able to design your own media. Schedule this through LRC staff. Will special equipment to use the media selected or developed be needed? Will help be needed in operating the equipment? All of this should be considered when selecting instructional media. Also, it will be necessary to schedule the media equipment.

   The LRC also contains a wealth of other print and non-print media for use in the classroom, as resource material, and for reference.

2. The Center for Staff and Curriculum Development: The Center offers a full range of services in all aspects of CBE development and professional development. The professional reading collection is housed here as are DACUM materials, V-TECS catalogs, and many other resources.

3. Student Development: This area includes the career lab, specialized tutorial services, and placement testing. These are valuable, often overlooked, resources.

APPENDICES

A. Institutional Competencies

B. Program outcomes

C. Glossary

D. Verbs for Use in Instructional Objectives

E. Checklist for Performance Objectives

F. Checklist for Criterion-Referenced Test Items

G. External Events of Instruction

H. DACUM Chart (sample)

I. Syllabus Format

BEAUFORT TECHNICAL COLLEGE

INSTITUTIONAL COMPETENCIES OF ASSOCIATE DEGREE GRADUATES*

Graduates from Beaufort Technical College with an associate degree should be able to:

- Demonstrate proficiency in the basic academic skills of reading, writing, speaking, listening, and computation;
- Identify and interpret the effects of science and technology in order to adapt to changes they bring about;
- Function effectively within our society, using knowledge of major technological, social, economic, and cultural forces;
- Use decision-making and problem-solving skills and tools;
- Work with many different kinds of people in a variety of roles in a positive way;
- Use the skills and understanding needed to continue the lifelong learning process that is necessary in order to adapt to an ever changing environment; and
- Satisfy the competencies in their chosen curriculum.

COMMITTEE MEMBERSHIP:

Ron Speaks, General Education (Chairman)
Ned Bassler, Business
Danny Crooks, Criminal Justice
Grace Dennis, General Education
Eleanor Gould, AD Nursing
Bill Pringle, Electronics/Electricity
Fred Seitz, Curriculum Development

***Institutional Competencies will apply to new associate degree students entering the College for the first time for the fall quarter 1986.**

BEAUFORT TECHNICAL COLLEGE

AUTOMOTIVE TECHNOLOGY PROGRAM

PURPOSE STATEMENT

The Automotive Technology program at Beaufort Technical College is designed to meet the increasing need for technologically competent service technicians. The program prepares its graduates for a variety of positions in dealerships as well as independent shops. The program of study focuses on technology associated with recent model automobiles.

PROGRAM OUTCOMES:

The graduate of the Automotive Technology program should be able to:

. . . Demonstrate a working knowledge of basic electricity/electronics theory;

. . . Identify steering and suspension types and diagnose and repair systems and their components;

. . . Identify brake system types and diagnose and repair brake systems and their components;

. . . Service and repair heating and air conditioning systems;

. . . Use state-of-the-art diagnostic equipment to identify and correct problems associated with engine performance;

. . . Identify and correct problems on various types of transmissions, manual and automatic, and drive axle;

. . . Use test equipment to diagnose problems and repair or replace components associated with the electricity/electronics systems; and

. . . Perform all outcomes to industry standards of time and quality.

AD1.11 **Recommended by Advisory Committee: 5/8/86**

BEAUFORT TECHNICAL COLLEGE

BUILDING CONSTRUCTION TECHNOLOGY PROGRAM

PURPOSE STATEMENT

The Building Construction Technology program is designed to prepare graduates to enter the building construction field in general low-rise construction, primarily residential. The program of study includes the necessary course work to prepare the graduate for entry level management positions in construction. Each student may choose among electives in order to concentrate in field supervision, estimating, and/or project management.

PROGRAM OUTCOMES:

The graduate of the Building Construction Technology program should be able to:

. . . Interpret construction specifications and drawings;

. . . Select methods and materials for construction projects;

. . . Estimate costs for construction projects;

. . . Inspect construction sites for compliance with local and federal building codes and safety requirements;

. . . Lay out building sites, using accurate surveying techniques;

. . . Function as an entry-level supervisor;

. . . Interpret cost information ordinarily used in entry-level management; and

. . . Prepare and apply construction schedules.

Recommended by Advisory Committee: 3/12/86

BEAUFORT TECHNICAL COLLEGE

COMPUTER DATA PROCESSING

PURPOSE STATEMENT

The Computer Data Processing program is designed to prepare graduates for entry-level positions in information management. From these entry-level positions, there are opportunities for advancement into system analysis and design, applications, operation and programming as well as supervisory positions.

PROGRAM OUTCOMES:

The graduate of the Computer Data Processing program should be able to:

. . . Define the role of data processing in support of a business' objectives;

. . . Identify and define user requirements;

. . . Select, implement and modify application packages;

. . . Write, test, and debug computer programs in high level languages;

. . . Prepare program, systems, and operational documentation;

. . . Identify and implement appropriate security measures; and

. . . Operate computer hardware.

Recommended by Advisory Committee: 5/14/85

BEAUFORT TECHNICAL COLLEGE

CRIMINAL JUSTICE PROGRAM

PURPOSE STATEMENT

The Criminal Justice Program includes a core of courses which provide the student with a complete survey of the many facets of the Criminal Justice System in the United States. A variety of electives are offered in specialty areas, such as Juveniles and the law and Criminalistics. Throughout the program of study, there is practical application in the form of role playing. For example, students investigate dramatized felony crime scenes and participate in mock trials, playing the roles of the various personalities involved in court. Graduates are prepared to seek entry level positions in the courts, public law enforcement, corrections or private security and investigations.

PROGRAM OUTCOMES:

The graduate of the Criminal Justice Program should be able to:

. . . Demonstrate a basic knowledge of constitutional and criminal law;

. . . Develop and maintain professional and ethical attitudes and behaviors;

. . . Demonstrate a comprehensive knowledge of the American criminal justice system;

. . . Use and comprehend terminology common to the criminal justice system;

. . . Use precise, technical communication skills and be able to complete such standard forms as the NCIC (National Crime Information Center) uniform incident report;

. . . Demonstrate contemporary knowledge of criminal justice, criminal law, and court decisions by staying abreast of developments and changes;

. . . Critique policies and operations constructively;

. . . Deal effectively with individuals from differing socio-economic levels by demonstrating a positive attitude toward individual constitutional and human rights;

. . . Demonstrate a positive attitude towards the constitutional and human right of others; and

. . . Respect the dignity and humanity of both victim and perpetrator of crime.

Recommended by Advisory Committee: 5/28/86

AD1.6

BEAUFORT TECHNICAL COLLEGE

GENERAL BUSINESS PROGRAM

PURPOSE STATEMENT

The General Business Program is designed to prepare graduates to meet the increasing needs in the ever-changing business environment.

PROGRAM OUTCOMES:

The graduate of the General Business Program should be able to:

. . . Analyze business information and make recommendations;

. . . Understand basic accounting and financial reports;

. . . Apply basic sales and marketing principles to common business situations; and

. . . Demonstrate the ability to be technically acceptable for placement into an entry level adminstrative business position.

Recommended by Advisory Committee: 5/21/86

BEAUFORT TECHNICAL COLLEGE

HEATING, VENTILATION, AND AIR CONDITIONING TECHNOLOGY PROGRAM

PURPOSE STATEMENT

Heating, cooling and refrigeration technicians are skilled workers who diagnose, service, install and repair heating, air conditioning and refrigation units in homes, schools and commercial and industrial buildings. The curriculum provides a core of courses which develop the necessary general knowledge in occupational skills required for the HVAC technician. The instruction includes both theory and practical experience in the College labs and shops.

PROGRAM OUTCOMES:

The graduate of the Heating, Ventilation, and Air Conditioning Technology program will be able to:

. . . Fabricate and install ductwork;

. . . Install HVAC and refrigeration equipment;

. . . Service HVAC and refrigeration equipment;

. . . Design a residential air distribution system and select heating and cooling equipment to meet design specifications; and

. . . Read and interpret HVAC mechanical blueprints.

Recommended by Advisory Committee: 6/12/86

BEAUFORT TECHNICAL COLLEGE

HOSPITALITY MANAGEMENT PROGRAM

PURPOSE STATEMENT

The Associate Degree Program in Hospitality Management comprises professional studies in the functional subject areas of financial management, employee and guest relations, sales and marketing, housekeeping, food and beverage, and tourism. The curriculum is designed to prepare graduates for entry level positions and enhance their potential to move into management positions in these fields. Basic principles of operation, communication, and management are stressed. Concentration is on the practical application of these principles, involving the most up-to-date techniques of the hospitality and tourism industry. Supplementing the class work, the program will require a practicum that gives the student a significant period of on-the-job experience prior to completion of the Associate Degree Program.

PROGRAM OUTCOMES:

The graduate of the Hospitality Management program should be able to:

. . . Employ terminology specific to the hospitality industry;

. . . Demonstrate a basic understanding of the hospitality industry;

. . . Perform the entry level functions and have a basic understanding of the principles of organization, communication, accounting, and human relations;

. . . Perform the communication skills and group interaction techniques necessary in the hospitality industry;

. . . Demonstrate a working knowledge of the fundamental accounting processes for the hospitality industry;

. . . Describe or define basic energy problems confronting the hospitality industry, understand maintenance and engineering principles specific to the industry, and delineate procedures for their management and/or solution;

. . . Explain the rights and responsibilities that the law imposes upon the innkeeping and/or food service manager;

. . . Plan and understand the basic hospitality principles of marketing and sales.

Recommended by Advisory Committee: 6/11/86

BEAUFORT TECHNICAL COLLEGE

INDUSTRIAL ELECTRICITY/ELECTRONICS

PURPOSE STATEMENT

The electricity/electronics program is designed to provide students with the basic technical background to pursue careers in the areas of either electronic servicing and maintenance or electrical installation and maintenance. The curriculum provides a technical background of electrical and electronic theory on which the student will be able to establish a firm foundation of technical skills. Throughout the program of study, experiments are conducted using state-of-the-art equipment to verify the theories presented. Practical hands-on assignments provide work-like experience for all students. Students have the option of concentrating in either Industrial Electricity or Industrial Electronics.

PROGRAM OUTCOMES:

The graduate of the Industrial Electricity/Electronics program should be able to:

Electricity Option

. . . Understand the principles and theory of electricity;

. . . Troubleshoot and analyze circuits using test equipment;

. . . Understand and comply with national, state, and local electrical codes as well as local utility regulations;

. . . Read and interpret wiring schematics and diagrams;

. . . Design and install motor control circuits;

. . . Design and install electrical systems in residential, commercial, and light industrial buildings; or

Electronics Option

. . . Understand the principles of electronic theory;

. . . Troubleshoot and analyze circuits using test equipment;

. . . Read and understand electronics schematics and circuits; and

. . . Troubleshoot electronic circuits,logical and digital circuits, and microprocessor and microcomputer circuits.

Recommended by Advisory Committee: 5/27/86

BEAUFORT TECHNICAL COLLEGE

ASSOCIATE DEGREE NURSING PROGRAM

PURPOSE STATEMENT

The Associate Degree Nursing Program is designed to prepare people to take the State Board of Nursing Examination for Registered Nurses. The curriculum in Nursing is designed in conjunction with competency statements destributed by the Statewide Master Planning Committee on Nursing Education. Graduates are generally employed as technical nurses in hospitals, physicians' offices, clinics and other health related agencies. They work collaboratively with other health care providers and are responsible for their own practice.

PROGRAM OUTCOMES:

The graduate of the Associate Degree Nursing Program should be able to:

. . . Function within the legal boundaries of the Nurse Practice Act and demonstrate knowledge of ANA Code of Ethics for Nurses;

. . . Conduct an initial and continuing patient assessment;

. . . Use collected data to develop a nursing plan of care for patients with common and recurring health care problems;

. . . Implement the agreed-upon plan of care;

. . . Apply teaching/learning concepts in developing and implementing patient teaching plans;

. . . Participate in monitoring the quality of nursing care being provided;

. . . Identify changes in a patient's health care status and differentiate changes that require the immediate attention of other health care team members;

. . . Document and communicate accurate and appropriate information;

. . . Supervise unlicensed personnel in the provision of patient care;

. . . Demonstrate evidence of cost-effective bahavoir, i.e. (1) time management, (2) conservation of materials, (3) reevaluation of elements in nursing care plans; and

. . . Evaluate own performance and assess need for further education and experience.

Recommended by Advisory Committee: 5/28/86

BEAUFORT TECHNICAL COLLEGE

OFFICE INFORMATION TECHNOLOGY
(SECRETARIAL SCIENCE)

PURPOSE STATEMENT

The Secretarial Science program prepares graduates for positions in the business, industry, government, legal, and medical environment. The curriculum offers both occupational skills and general knowledge necessary for efficient performance of secretarial duties. The overall objectives include the professional, social and cultural development of the secretarial student.

PROGRAM OUTCOMES:

The graduate of the Secretarial Science program should be able to:

. . . Demonstrate a good command of standard American English grammar, spelling, punctuation and oral communication;

. . . Take dictation both in shorthand and by machine, transcribe accurately and type at a rate of at least 60 corrected words per minute;

. . . Demonstrate good human relations skills and telephone techniques;

. . . Be proficient in the use of standard office equipment and word processing systems;

. . . Demonstrate good organizational skills, including establishing a filing system and setting priorities; and

. . . Demonstrate an understanding and dedication to the practice of secretarial ethics.

Recommended by Advisory Committee: 4/29/86

Terms Often Used in Competency-Based Education

Academic Entry Level - The knowledge and the skills which a student possesses when first entering a course of study. (This should be a measurement of actual achievement.)

Acceleration - The ability to learn and master a competency at a faster pace. A CBE system allows the student to test out skills he may have acquired earlier.

Assessment - Determining progress made by a student toward attainment of specified competencies.

Competencies - Those skills, knowledge, or attitudes required for job performance. Three types of competency statements may be used in a course syllabus.

> Statements Listing
>
> Program Competency - Job-entry skills which must be mastered before exiting a program.
>
> Course Competency - Competency statements addressing major topics or units into which a course is divided.
>
> Specific Competencies (Unit) - Knowledge, skills and attitudes which students should possess after completing a course. They are brief statements describing:
>
> A. Precisely what the student should be able to do (skill) or is expected to know (knowledge),
> B. Under what conditions the student will be expected to perform the skill or knowledge, and
> C. How well the student must perform the skill or knowledge to show that he or she has attained the competency area.

Course Outline/Syllabus - An instructor-prepared document which provides students with course name and credit hours, prerequisites, a list or required instructional materials, attendance requirements, grading procedures, course competencies, specific competencies, and learning objectives. (See Appendix I.)

Criterion-Referenced Test - A test to determine whether or not a student has learned to demonstrate the knowledge or skill under the specified conditions stated in the course syllabus. The criterion-referenced test is normally based on the specific competencies.

DACUM (Developing a Curriculum) - The DACUM process is essentially defined as a single sheet skill profile that serves as both curriculum plan and an evaluation instrument for an occupation.

Learning Activities/Resources - The methods, materials and activities the teacher plans and presents in order to facilitate learning.

Learning Objectives - Very specific day-to-day expected student outcomes for a unit of work. These are subdivisions of the specific competencies.

Level I Course Description - Is a broad generic body of knowledge statement of the course. This entry will address course content and will include: prefix, number, title, and credits. This description is usually the one considered by other colleges for course transfer purposes.

Level II Course Description - Consists of stated specific learning outcomes (competency-based outcomes terminology). This description is not intended as an all-inclusive syllabus.

EXAMPLE:

ANA 113 INTEGRADED HUMAN SCIENCES II 4.0 Cr.

LEVEL I: This lab oriented survey course is designed to introduce the student to the basic study of oral pathology, nutrition, pharmacology, head and neck anatomy, and physiology as related to the role of the dental assistant.

LEVEL II: Upon successful completion of this course, the student should be competent to perform the following tasks: list and describe the major structures of the head and neck; describe the causes, appearances, and treatment of major diseases of the mouth; list and describe common oral medications used in the dental office and explain how they are administered and how they work; write a prescription properly; design a nutritionally balanced one-day meal plan and explain the basis of a balanced diet for various age and social groups.

SBTCE, as revised 6-10-85

Module - A self-contained learning package, designed to teach the specific skills or knowledge of a given unit or competency area. A module may include all learning materials and resources required or may refer the learner to other learning materials, such as textbooks, films, video tapes, filmstrips, etc.

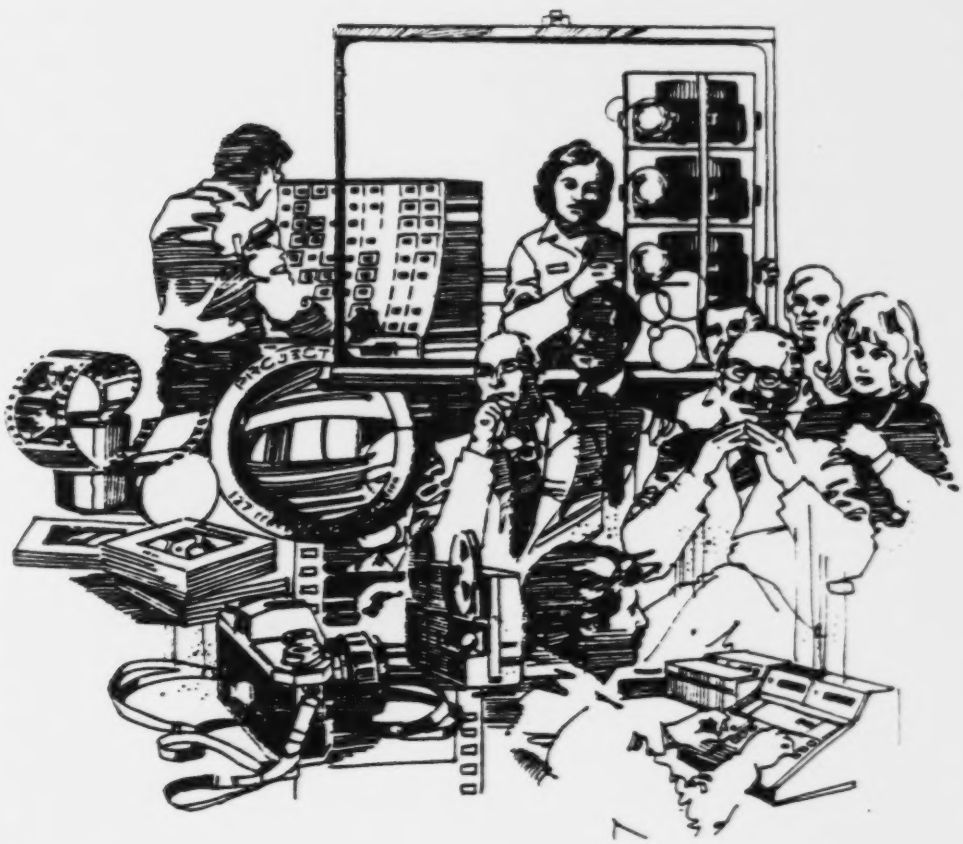
Norm-Referenced Test - Test used to compare a student's level of achievement in relation to the achievement of other members in the class.

Pre-Test - Criterion-referenced tests which test the skills and knowledge possessed by individuals before they receive instruction. Pre-tests are administred at the beginning of a course, unit, or class period.

Post-Test - Criterin-referenced tests which tests the level of student's mastery of specific competency or area.

Remediation - Allows the instructor to directly address the individual problems of a student. It is an effort to supply the missing essential skills necessary to academic achievement.

Verification (Validity) - The accuracy with which a test measures what it is intended to measure or a curriculum teaches what it is intended to teach.



VERBS FOR USE IN STATING INSTRUCTIONAL OBJECTIVES

1. Knowledge	2. Comprehension	3. Application
define	restate	translate
record	discuss	interpret
list	describe	apply
recall	recognize	employ
name	explain	use
relate	express	demonstrate
	identify	dramatize
	locate	practice
	report	illustrate
	review	operate
	tell	schedule
		shop
		sketch

4. Analysis	5. Synthesis	6. Evaluation
distinguish	compose	judge
analyze	plan	appraise
differentiate	propose	evaluate
calculate	formulate	rate
experiment	arrange	compare
test	assemble	value
contract	collect	revise
criticize	construct	score
diagram	create	select
debate	organize	choose
inventory	manage	assess
relate	prepare	measure
solve	design	estimate
examine		
appraise		
question		
compare		

APPENDIX E

CHECKLIST FOR PERFORMANCE OBJECTIVES

The following standards have been applied to the course objectives listed in the course outline for the specific course identified above.

If a standard receives a YES, it is acceptable.

If a standard receives a NO, revision is necessary.

If a standard receives neither Yes nor No, it is not applicable to the listed objectives.

STANDARDS	YES	NO
I. Does each objective contain a CONDITION statement(s)?		
a. does the CONDITION statement in each objective specify the following which are relevant to the objective?		
1. materials		
2. equipment		
3. stimuli		
4. setting		
5. time		
6. novel examples		
7. memory/recall		
8. references		
9. other situational conditions		
b. is the CONDITION statement in each cognitive or psychomotor objective free of:		
1. instructional activities/teaching methods		
2. irrelevant conditions		
3. voluntary behaviors		
4. unobtrusive measurement		
c. does the CONDITION statement in each effective objective specify that the behavior is to be:		
1. measured unobtrusively		
2. voluntary		

CHECKLIST FOR PERFORMANCE OBJECTIVES

STANDARDS	YES	NO
II. Does each objective contain one measurable BEHAVIOR?		
a. does the BEHAVIOR component in each cognitive or psychomotor objective specify:		
1. a single, positive, measurable verb		
2. an object for the verb		
b. does the BEHAVIOR component in each attitudinal objective contain a description of one or more behaviors which are representative of the desired attitude?		
III. Does each objective contain a STANDARD statement(s)?		
a. does the STANDARD match the behavior component?		
b. is a checklist provided or referred to in the objectives which required a product, demonstration, or attitude?		
c. is one of the following standards included for each objective not requiring a checklist?		
1. a description of the acceptable range of accuracy		
2. a specified number of errors acceptable		
3. a specified percent or number correct		
a. if percent is specified, is the percent required in harmony with the number of possible points, e.g., if there are 10 questions, the possible score is any multiple		

III. (continued)

		YES	NO
	of 10 as a percentage of items correct (i.e., 90%, 70%, 50%) but not 75%.		
4.	a description of the minial level of time or speed allowed		
5.	references to textbook, manual, national, or class standards (Title and page number)		

Myers, 1979

APPENDIX F

CHECKLIST FOR CRITERION REFERENCED TEST ITEMS

SELECTED, CONSTRUCTED AND FREE RESPONSE CRITERION REFERENCED TEST ITEMS

	YES	NO
1. The Test item and objective are congruent with each other, that is:		
a. Is the behavior required by the criterion item the same behavior described in the performance objective?		
b. Are the conditions required by the criterion item the same as the conditions described in the performance objective?		
c. Are the standards for passing or failing the criterion items the same as the standards stated in the performance objective?		
2. Do the synonyms or more simple explanations used to translate the objective into a test item agree with the type of learning intended by the performance objective?		
3. Does the test item measure whether or not a student has mastered a performance objective (absolute standard)?		
4. Are the test items designed to achieve a large range in scores or a "normal" distribution of scores (relative measurement)?		

FREE RESPONSE CRITERION REFERENCED ITEMS

1. Is there a checklist for evaluating the free response?		
2. Are the checklist categories free from value-laden judgements, e.g., excellent, poor, outstanding, etc.		

* To be acceptable, the criterion items should receive a "NO" on this criterion.

Myers, 1979

EXTERNAL EVENTS OF INSTRUCTION

The external events of instruction are those teaching steps in any instructional presentation which are planned and controlled by the teacher.

There are nine such steps or events. They are:

1. Gain the attention of the learner.
2. Inform the learner of the objective.
3. Stimulate recall of prerequisite learnings.
4. Present the stimulus material.
5. Provide "learning guidance" (demonstration of examples of the desired performance).
6. Elicit the performance.
7. Provide feedback about performance correctness.
8. Assess the performance.
9. Enhance retention and transfer of the learned performance.

(Briggs, 1977)

WORD PROCESSING OPERATOR

SKILL PROFILE

SAMPLE

Category		-COMPETENCIES-						
A	DEMONSTRATE SECRETARIAL SKILLS	A-1 Follow Directions	A-2 Exemplify Professionalism	A-3 Proofread and Edit	A-4 Follow Company Policies and Procedures	A-5 Spell	A-6 Punctuate Properly	A-7 Use Proper Grammar
		A-8 Use Basic Math	A-9 Use Basic Office Equipment	A-10 Transcribe from Dictation Equipment	A-11 Utilize Reference Manuals (Dictionaries)	A-12 Perform Basic Receptionist Duties	A-13 Demonstrate Proper Phone Handling Techniques	
		A-14 Apply Appropriate Format	A-15 Use Equipment and Supplies Carefully	A-16 Maintain Calendar	A-17 Compile Information	A-18 Explain Organizational Chart	A-19 Be Flexible	A-20 Demonstrate Self-Reliance
		A-21 Display Initiative	A-22 Keep Abreast of Trends and Technology	A-23 Demonstrate Responsibility	A-24 Establish and Maintain Filing System	A-25 Practice Confidentiality		
B	TYPE/KEYBOARD	B-1 Demonstrate Proper Keystroking	B-2 Demonstrate Mastery of Numerical Keystroking	B-3 Demonstrate 60 WPM Keyboarding Speed (Corrected)	B-4 Identify and Use Specialized Keys	B-5 Format and Layout	B-6 Use Appropriate Commands	
		B-7 Design Graphics and Forms	B-8 Demonstrate Required Level of Productivity					
C	OPERATE EQUIPMENT	C-1 Demonstrate Start-Up Procedure	C-2 Demonstrate Shut-Down Procedure	C-3 Demonstrate Power Loss Procedure	C-4 Demonstrate Printing Process	C-5 Demonstrate Archive/Retrieval Process	C-6 Demonstrate Optimum Equipment Capability	
		C-7 Perform Simple Preventive Maintenance	C-8 Utilize Equipment Reference Manuals	C-9 Follow Safety/Health Rules	C-10 Operate Peripheral Equipment	C-11 Use Communications Capabilities	C-12 Follow Security Procedures	
D	ORGANIZE/ COORDINATE	D-1 Maintain Supply Levels	D-2 Organize Work Station	D-3 Maintain Electronic Filing System	D-4 Set Up Indexes	D-5 Organize Media Storage	D-6 Set Up Media Filing	D-7 Schedule Time
E	COMMUNICATE	E-1 Demonstrate Proficient Use of Vocabulary/ Job Terminology	E-2 Listen	E-3 Speak Clearly	E-4 Read and Comprehend	E-5 Use Techniques of Good Writing	E-6 Educate Users	
F	MAINTAIN INTERPERSONAL RELATIONSHIPS	F-1 Respect Others	F-2 Adapt to Personality Differences	F-3 Display Interest in Self-Development	F-4 Minimize Stress	F-5 Demonstrate Versatility	F-6 Utilize Team Approaches	

May, 1984

Beaufort Technical College
Beaufort, SC 29902

BEAUFORT TECHNICAL COLLEGE

REQUIRED ELEMENTS FOR CBE COURSE SYLLABUS

June 20, 1986

The following elements must be included in each course syllabus. Satisfactory and correct inclusion of these elements earns a rating of M ("meets") for the course syllabus developer/reviser.

A. COVER PAGE (must use appropiate standard cover sheet)

1. Course Title and number;course credit (hours).

2. Catalog description (level I description).

3. Prerequiste or co-requiste (if none, so state).

4. Date of revision (or intial development) entered in block.

5. Effective date (first quarter to be used) entered in block.

6. Name(s) of person(s) responsible for development or revision entered in block.

B. STANDARD CONTENTS (contents that change usually no more than annually;inside pages)

1. Course objectives (level II description; may be expanded)

   Upon successful completion of this course, the student should be competent to perform the following tasks:...

2. Course topic outline.

3. Course requirements: must include course policies & procedures; attendance regulations; course standards, evaluation & criteria; and any other necessary course requirements and/or information.

4. Course resources and up-to-date bibliography. This should include both print and non-print materials and their location(s).

5. Any other necessay items of course process or procedures.

C. VARIABLE CONTENTS (contents that change from quarter to quarter or from instructor to instructor)

1. Course number and section number.

2.Course location and times.

3.Course instructor; office hours; office location; office telephone number.

4.Course text (including author, publisher,edition and date) and other required course materials, if any.

5.Course calendar of assignments, due dates, test schedule, etc.

6.Any other necessary items of information.

D. STANDARD COLLEGE ATTACHMENT (single tear-off sheet; provided)

Statement of Transmittal

A.The Office of Staff and Curriculum Development will coordinate and provide both the Standard Course Cover Sheet for each division and the Standard Statement of Transmittal. Changes/revisions of Level I/II course descriptions should be coordinated through that office for entry on the VAX course file.

Each course will be reviewed at least annually; for each course, a record will be kept of dates of development; review(s) by Advisory Committees, Dean, or faculty (including evaluation as part of the Faculty Development/Evaluation System); recommendations based on review(s); and revision(s).

B.Each Division Office will be responsible for the standard inside contents and the variable contents section of the syllabus, based on individual instructor development/revision.

C.The individual full time faculty member is responsible for the completeness and correctness of the syllabus and other course materials given to the students; the division dean is responsible for the completeness and correctness of syllabi used by temporary faculty.

D.Each division office is responsible for providing the Office of Staff and Curriculum Development with a file copy of each syllabus currently in use.

E.The above represents the minimum reqirement for a CBE-formatted course; individual instructors may develop additional unique elements, thereby earning themselves credit towards a potential E ("exceeds") as part of faculty evaluation.

Beaufort Technical College
HUMAN SERVICES DIVISION

SAMPLE

NUR 153 NURSING PROCESS I 6.0 Cr.

COURSE DESCRIPTION: Classroom, college laboratory and selected clinical laboratory experiences will be utilized to enable the student to develop beginning skills in the use of the nursing process in assisting adults to meet their identified basic needs. The student will acquire beginning knowledge of the roles of the technical nurse as a member of the health team. Technical skills in nursing are emphasized. This course is taught in the Fall Quarter.

PREREQUISITE: ANATOMY (BIOL 232) concurrent or completed

June 1986	Fall 1986	C. Rosequist/E. Gould
Date of Development/Revision	Effective Date	Developed/Revised By

Beaufort Technical College

SAMPLE

STATEMENT OF TRANSMITTAL

This syllabus has been given to you to make clear the requirements, due dates, and instructor expectations for the course; your instructor has discussed the syllabus with you, and you have been given sufficient opportunity to ask questions concerning it.

Please sign below to indicate that you have received an appropriate and adequate course introduction, and turn this sheet in to your instructor.

****

I have received the syllabus for _____(course); it has been explained to me, and I understand the course requirements, schedule of activities and due dates, and instructor expectations.

_____ signed

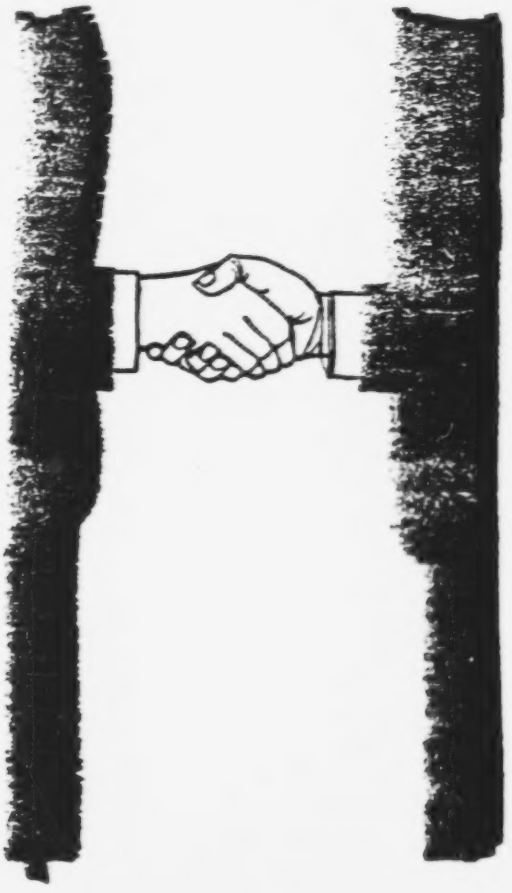
_____ date

ACKNOWLEDGEMENTS

Nancy Ayers, Herb Bradley, and Holly Mann, The CBE Handbook, Orangeburg-Calhoun Technical College, 1982.

Phyllis Myers and Bill Adelberger, The CBI Handbook, Trident Technical College, 1979.

Tim Nolan, Toward Instructional Improvement, Beaufort Technical College, 1983.



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